

# Key Project Elements

## Detention Storage

Detention storage is a storm water management tool that is used to control flow rates from large storm events. This control allows downstream storm water facilities to be smaller. Smaller facilities are generally more economical to construct and maintain and are more compatible with confined areas.

Detention storage will be implemented in this project through construction of a detention pond in the northern portion of Garden of the Gods Park. Water from small storm events will pass through the pond unaffected. A portion of the water from large and infrequent storm events will be temporarily stored in the pond and then released downstream as high runoff rates from the storm subside.



Detention and sediment management area looking north from 30th Street

## Natural Channel Stabilization and Realignment

The Waldo Canyon Fire has caused an increase in runoff from small storm events and thus Camp Creek is conveying larger and more frequent flows than in the past and the natural portions are eroding at an accelerated rate. Before the fire, Camp Creek through Garden of the Gods Park and Rock Ledge Ranch was relatively stable and had a healthy relationship with its floodplain. This has allowed large flood flows to spread out over the floodplain where they were less erosive. As the channel erodes and becomes deeper and wider more of the flood flows are concentrated in the channel and the erosive forces become increasingly erosive.



Approximately 30 naturalistic channel stabilization structures with large boulders will be constructed along Camp Creek through Garden of the Gods Park and Rock Ledge Ranch to help stabilize the channel and restore the healthy relationship with its floodplain. The structures will accomplish this by controlling the depth of the channel and dissipating excess energy associated with the water flowing in the Creek. A short segment of the Creek near the chapel in Rock Ledge Ranch will be re-aligned to remove sharp bends and improve channel hydraulics.

## Improved Conveyance Capacity, Function and Appearance

The existing Camp Creek bridge at Gateway Road and the existing culverts along 31<sup>st</sup> Street located north of the Bijou Street/Echo Lane intersection do not have adequate capacity to convey the planned 100-year detained flood flow in Camp Creek. In addition, the existing culverts and the 31<sup>st</sup> Street channel are in a degraded state and nearing the end of their effective life. Portions of existing Gateway Road are very narrow and present safety issues for motorists and bicyclists.

The 31<sup>st</sup> Street channel will be replaced with a more naturalistic channel consisting of a narrow boulder and rock-lined low flow channel to convey the runoff from frequent storm events and grass-lined upper banks to contain flows from larger infrequent storm events. An extension of the Foothills Trail between Rock Ledge Ranch and West Platte Avenue will be included in the western grass-lined slope of the new 31<sup>st</sup> Street channel section. Culverts and pedestrian bridges along 31<sup>st</sup> Street will be replaced with larger bridges. The Gateway Road bridge will be replaced with a larger bridge or culvert and Gateway Road will be widened to better accommodate motorized vehicles and bicycle traffic.



Grass and rock-lined channel and multi-use trail along 31st Street

**More detailed information about the project elements is presented at other stations in the room.**

**The project team looks forward to answering your questions about the project.**